

CLAIMS

What is claimed is:

1. A system for providing secure communication of a voice call placed across a PSTN through a telephony resource, wherein a voice call is understood to refer to a call using a bearer service that is circuit mode, with either 64Kbps information transfer rate or 64Kbps information transfer rate adapted to 56Kbps, that uses unrestricted or restricted digital information transfer capability, said system comprising:
 - 6 a security policy including rules defining a voice call to be conducted in a secure mode;
 - 8 a VPSTN for implementing said rules in said security policy and initiating encryption of the voice call using a secure mode selected from a predetermined set of secure modes and placing the call across the PSTN;
 - 11 said VPSTN including an in-line device for intercepting and modifying the set-up of a voice call identified by said security policy to be conducted in a secure mode;
 - 13 said modification of said call set-up including changing said call set-up from a request for bearer capability to support a voice call to a call set-up including a request for bearer capability to support a data call, said data call being understood to refer to a call using a bearer service that is circuit mode, with speech or 3.1 kHz audio information transfer capability and user information layer 1 protocol G.711 mu-law or A-law.

1 2. The system as defined in Claim 1 wherein said VPSTN also provides for
2 initiating an encryption of the voice call using another secure mode selected from said
3 predetermined set of secure modes and placing another data call should a prior attempt to
4 place the call across the PSTN as a data call fail.

1 3. The system as defined in Claim 2 wherein said VPSTN also provides for
2 initiation of encryption of the voice call in a voice call secure mode should all attempts at
3 placing the call across the PSTN as a data call fail.

1 4. A method for providing secure communication of a voice call placed across a
2 PSTN through a telephony resource, wherein a voice call is understood to refer to a call using
3 a bearer service that is circuit mode, with either 64Kbps information transfer rate or 64Kbps
4 information transfer adapted to 56Kbps, that uses unrestricted or restricted digital
5 information transfer capability, said method comprising the steps of:

6 establishing a security policy including rules which define a voice call to be
7 conducted in a secure mode;

8 using a VPSTN to implement said rules in said security policy and initiating
9 encryption of the voice call using a secure mode selected from a predetermined set of secure
10 modes and placing the call across the PSTN, said VPSTN including an in-line device for
11 intercepting and modifying the set-up of a voice call identified by said security policy to be
12 conducted in a secure mode;

13 said step of using a VPSTN to modify said set-up of those voice calls identified by
14 said security policy to be conducted in a secure mode includes changing said set-up from a
15 request for bearer capability to support a voice call to a call set-up including a request for
16 bearer capability to support a data call, said data call being understood to refer to a call using
17 a bearer service that is circuit mode, with speech or 3.1 audio kHz audio information transfer
18 capability and user information layer 1 protocol G.711 mu-law or A-law.

1 5. The method as defined in Claim 4 wherein said VPSTN also provides for
2 initiating an encryption of the voice call using another secure mode selected from said
3 predetermined set of secure modes and placing another data call should a prior attempt to
4 place the call across the PSTN as a data call fail.

1 6. The method as defined in Claim 5 wherein said VPSTN also provides for
2 initiation of encryption of the voice call in a voice call secure mode should all attempts at
3 placing the call across the PSTN as a data call fail.